EPA/AMD/R02-99/516
1999

EPA Superfund
Record of Decision Amendment:

UNIVERSAL OIL PRODUCTS (CHEMICAL DIVISION)
EPA ID: NJD002005106
OU 01
EAST RUTHERFORD, NJ
12/08/1998

SUPERFUND RECORD OF DECISION

UNIVERSAL OIL PRODUCTS SITE
EAST RUTHERFORD, BERGEN COUNTY
NEW JERSEY

Prepared by: N. J. Department of Environmental Protection
Site Remediation Program
Bureau of Federal Case Management
October 1998

DECLARATION FOR THE RECORD OF DECISION AMENDMENT

SITE NAME AND LOCATION

Universal Oil Products
East Rutherford, Bergen County, New Jersey

STATEMENT OF BASIS AND PURPOSE

This Record of Decision (ROD) Amendment presents the amended remedial action for the Universal Oil Products Site, which was chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan, as amended, 40 CFR Part 300. This ROD Amendment explains the factual and legal basis for selecting the amended remedy. The information supporting this remedial action is contained in the Administrative Record for the Site, the index of which can be found in Appendix III to this document.

The United States Environmental Protection Agency, the support agency for this Site, concurs with the selected remedy, as indicated by the signature of the Regional Administrator at the end of this declaration statement.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from the Universal Oil Products Site, if not addressed by implementing the response action selected in this ROD Amendment, may present an imminent and substantial threat to public health, welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The selected amended remedy addresses the Polychlorinated biphenyl/carcinogenic Polycyclic Aromatic Hydrocarbon (PCB/cPAH) contaminated soils at the Universal Oil Products Site. The major components of the selected amended remedy include the following:

- Approximately 6,200 tons of remaining soils with concentrations greater than remedial action goals will be excavated;

- Soils with carcinogenic PAHs above the site remediation goals will be disposed off-site;

- Soils with PCB concentrations at or above 50 parts per million (ppm) will be disposed of in a Toxic Substances Control Act permitted landfill;

- Soils with PCB concentrations above 2 ppm but below 50 ppm will be disposed of in a Resource Conservation and Recovery Act Subtitle D permitted landfill.

DECLARATION OF STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. The remedy utilized permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable. The selected remedy is a permanent remedy since the contaminated soil will be removed from the site. However, because treatment of hazardous substances, pollutants or contaminants at the site was not found to be practicable, the remedy does not satisfy the statutory preference for treatment as a principal element.

Because this remedy will result in hazardous substances remaining on the Site above health-based levels, a review will be conducted within five years after commencement of the remedial action to ensure that is continues to provide adequate protection of human health and the environment.

Richard J. Gimello, Assistant Commissioner
New Jersey Department of Environmental Protection

10/14/98
Date

Jeanne M. Fox, Regional Administrator
U.S. Environmental Protection Agency
Region II

12/8/98
Date

TABLE OF CONTENTS

INTRODUCTION

Universal Oil Products (UOP) consists of a 75 acre site located in the Borough of East Rutherford, Bergen County, New Jersey. The UOP site occupies a part of the Berry's Creek drainage basin. A portion of the site is located in the Hackensack Meadowlands District, which is administered, in part, by the Meadowlands Development Commission. The site was developed as an industrial facility in 1932 and continued operating as an industrial facility until 1979 when operations ceased.

The New Jersey Department of Environmental Protection (NJDEP) is the lead agency that has overseen activities at the UOP site since 1982 under various Administrative Consent Orders (ACOs). The U.S. Environmental Protection Agency (EPA) is the support agency. The site was listed on the National Priorities List (NPL) on September 8, 1983. Current site work is being performed under a May 23, 1986 ACO between NJDEP and UOP.

As with many Superfund sites, the problems at the UOP site are complex. As a result, NJDEP has organized the remedial work into three operable units. Operable Unit One addresses the uplands contaminated soils and leachate at the UOP site. Operable Unit Two consisted of two on-site waste lagoons; these lagoons were addressed by a removal action performed by the responsible parties with NJDEP oversight in 1990. Operable Unit Three, the stream channels, are currently under investigation.

The Record of Decision (ROD), signed on September 30, 1993, documented the selection of the remedial action for Operable Unit One. The ROD addressed remediation of soils contaminated with polychlorinated biphenyls/carcinogenic polycyclic aromatic hydrocarbons(PCB/cPAH), volatile organic compounds (VOCs), and lead, as well as VOC leachate. Under the 1993 ROD, PCB/cPAH and VOC contaminated soils were to be treated by thermal desorption, lead contaminated soil was to be capped, and VOC leachate was to be pumped and treated. This document amends the 1993 ROD by modifying the selected remedy for the disposal of the PCB/cPAH contaminated soils in Operable Unit One. The other requirements of the ROD remain unchanged.

In 1996, construction activities associated with the remedy selected in the 1993 ROD began. A thermal desorption unit treated 8,200 tons of the 14,400 tons of PCB/cPAH contaminated soils. The soils that were treated by the thermal desorption unit, as well as less contaminated PCB/cPAH soils, were placed under an on-site cap along with lead contaminated soils. To date, 9,700 tons of PCB/cPAH contaminated soil have been capped. However, the thermal desorption unit was unable to meet cleanup goals efficiently. Furthermore, the operation of the thermal desorption unit was the source of odor complaints from workers at an adjacent property. In response to these problems, the thermal desorption plant was removed from the site in 1997; 6,200 tons of PCB/cPAH contaminated soil remain untreated at the site. Due to the difficulties encountered with the on-site treatment of PCB/cPAH contaminated soil, combined with the decrease in the cost for off-site disposal, off-site disposal was considered as an alternative for

PCB/cPAH contaminated soils. This post ROD change to the selected remedy represents a fundamental change, and therefore, a ROD amendment is required.

The Proposed Plan for the ROD Amendment was released to the public for comment on June 17, 1998. This document as well as the 1993 ROD and the Remedial Investigation and Feasibility Study (RI/FS) Report are available to the public in both the administrative record and information repositories indicated below. The notice of availability for these documents was published in the South Bergenite on June 17, 1998. A public comment period on the documents was held from June 17, 1998 to July 17, 1998. In addition, a public meeting was held on June 30, 1998. At this meeting, NJDEP representatives answered questions about the proposed remedy for the site. No written comments were received during the public comment period. In accordance with the NCP, section 300.825(a)(2), this ROD Amendment will become part of the Administrative Record File. The Administrative Record may be found at the following locations:

East Rutherford Municipal Building
1 Everett Place
East Rutherford, NJ 07073
(201) 933-3444

East Rutherford Memorial Library
143 Boiling Springs Avenue
East Rutherford, NJ 07073
(201) 939-3930

NJ Department of Environmental Protection
Bureau of Community Relations, Floor 6
West 401 East State Street, P.O. Box 413
Trenton, New Jersey 08625
(609) 984-3081

SITE HISTORY AND SELECTED REMEDY

The UOP site was developed in 1932 by Trubeck Laboratories and was originally used as an aroma chemical laboratory. In later years, the facilities were expanded to handle chemical wastes and solvent recovery operations. Two waste water holding lagoons were used as holding areas for the facility waste water. UOP acquired the property and facilities in 1960. Use of the waste treatment plant and wastewater lagoons ceased in 1971. All operations at the facility were terminated in 1979. In 1980, all structures, except concrete slabs and a pipe bridge spanning railroad tracks, were demolished. During the years of operation, both the waste water lagoons and the routine handling of raw materials and wastes resulted in the release of various hazardous substances to the soils and shallow groundwater.

Due to the site location and elevation, the UOP site is regularly subject to flooding. The UOP site is flat (elevations vary from 4 to 9 feet above mean sea level) and is partly covered by a tidal salt marsh and a system of natural and artificial surface water channels that cross the site. These surface water bodies are all tidally affected and have relatively high salinity concentrations. The main channel on the site is commonly referred to as Ackerman's Creek, which drains to Berry's Creek, a tributary to the Hackensack River. Many flora and fauna are found in the vicinity of the UOP site including dense stands of common reed grass, other various wetlands plant species, sixty five kinds of birds, many mammals, one amphibian and three reptile species.

The UOP property is surrounded by undeveloped tidal marshes, highways, and commercial and light industrial properties. Immediately to the north is the Matheson Air Products facility, a metal finishing facility, a truck and car repair shop, and a hotel. To the east are Berry's Creek and tidal marshes. To the south are commercial properties. To the west is New Jersey Route 17. West of Route 17 are a Becton Dickinson manufacturing facility and commercial properties. The closest residential area is approximately one half mile to the west of Route 17 (See Figure 1).

To facilitate investigations, the UOP site has been divided into six areas: Area 1, 1A, 2, and 5 are the uplands area of the site; Area 3 is the former waste lagoons associated with the waste water treatment plant; and Area 4 is the on-site stream channels (see Figure 1). The remedial investigation and feasibility study were completed by the responsible party in 1990. The remedial investigation made several conclusions concerning site conditions at Areas 1, 1A, 2 and 5 as described below.

Area 1, 1A and 2 samples indicated the presence of VOCs in the soil and groundwater. Area 1 sampling results indicated that total VOCs in ground water ranged from Below Detection Limits (BDL) to 56 parts per million (ppm) and total VOCs in soil ranged from BDL to 74.8 ppm. Area 1A results demonstrated higher levels of total VOCs with ground water ranging from BDL to 66 ppm total VOCs and soil ranging from BDL to 1747 ppm. Area 2 had the highest total VOC levels with sampling indicating groundwater levels from BDL to 210 ppm and soils ranging from BDL to 2108 ppm (see Figures 2,3, and 4).

Area 5 samples indicated that high levels of various base neutral compounds were present in surface soils. In particular, carcinogenic PAHs were detected in Area 5 soils to levels of up to 1474 ppm (see Figure 5, and the Table in Appedix II for list of carcinogenic PAHs).

Area 5 samples also indicated that shallow soils were contaminated with PCBs. PCBs were detected at levels ranging from non detect to greater than 2000 ppm. The area with elevated levels of PCBs overlaps the area with elevated levels of carcinogenic PAHs. Also, a small portion of Area 2 was contaminated with PCBs (see Figure 6).

A separate portion of Area 5 soils has elevated levels of lead. Maximum levels of 14,100 ppm have been detected in Area 5. Lower levels of lead were detected in Areas 1 and 1A (see Figure 7).

In addition to the Remedial Investigation, a Seep/Sewer Investigation was performed in Areas 1, 1A, and 2 of the site. This investigation focused on an apparent seep discharging to Ackerman's Creek and the various sewers located in these areas of the site. A seep is usually an area where ground water is naturally discharged from an aquifer. The seep at UOP was attributed to the presence of an old storm sewer network. Sediments within the sewer system contained elevated levels of VOCs and PCBs.

Based on the results of analytical sampling, various pathways for contaminant migration were evaluated. These evaluations are part of a detailed risk assessment that is summarized in the 1993 ROD.

In 1993, NJDEP issued a ROD that documented the selected remedy for contaminated soils and leachate as follows:

For PCB/cPAH contaminated soils:

- On-site thermal desorption of highly contaminated soil and placement of treated soils on site;
- soil cover for less contaminated soil;
- institutional controls.

For VOC contaminated soils:

- On-site thermal desorption and placement of treated soils on site.

For Lead contaminated soils:

- Soil cover/cap;
- institutional controls.

For Volatile Organic Compound contaminated leachate:

- Leachate collection trenches and pits;
- on-site treatment of leachate;
- discharge of treated effluent to groundwater.

The remedial design and remedial action work on the site has been conducted by the responsible party. The remedial design was completed in November 1995, and on-site construction activities began on April 4, 1996. Lead contaminated soil has been capped, a leachate collection system is pumping and treating leachate, and 8,200 tons of the PCB/cPAH contaminated soils have been processed through the thermal desorption unit.

BASIS FOR THE ROD AMENDMENT

Under the 1993 ROD, highly contaminated soils, defined as those with PCB concentrations greater than 25 ppm and total cPAHs greater than 29 ppm were to be treated by on-site thermal

desorption. Less contaminated soils (between 2 and 25 ppm for PCBs and less than 29 ppm cPAHs) were to be capped on-site.

Thermal desorption was to, at a minimum, reduce PCB concentrations to less than 10 ppm and total cPAHs to less than 20 ppm. Remediation goals established for this technology at the UOP site were 2 ppm for PCB contaminated soils and those values for individual cPAHs listed in the Table in Appendix II. Treatment residuals not meeting the remediation goals but less than the 10 ppm level for PCBs and the 20 ppm level for total cPAHs were placed under an on-site soil cap. Approximately 8,200 tons of PCB/cPAH contaminated soil have been treated by thermal desorption and 9,700 tons of PCB/cPAH contaminated soil have been capped.

The continued operation of the thermal desorption unit proved inefficient and was the source of odor complaints from workers at an adjoining property. The high volume of fine soil particles encountered at the site required longer contact times through the thermal desorption unit than originally estimated. Each load of contaminated soil placed in the thermal desorption unit took twice the estimated contact time to reduce PCB/cPAH contaminated soils to acceptable levels. The added contact time resulted in increased costs for the thermal desorption technology to such an extent that treatment costs exceeded off-site disposal costs. In 1997, citing the difficulties encountered with the on-site thermal desorption technology, the PRP requested that NJDEP and EPA consider allowing off-site disposal of the remaining PCB/cPAH contaminated soil.

DESCRIPTION OF ALTERNATIVES

This amended ROD evaluates in detail two remedial alternatives for addressing the remaining 6,200 tons of PCB/cPAH contaminated soil at the UOP site. The time to implement each remedial alternative reflects the time required to design and construct and implement the remedy. The costs presented for each alternative include capital costs and operation and maintenance (O&M) costs over a thirty year period. Alternative 1 is the remedy chosen in the 1993 ROD. Alternative 2 is the new alternative.

Alternative 1: Thermal Desorption (Remedy selected in 1993 ROD)

Estimated Capital Cost:	$1,885,600
Estimated O&M Cost:	$1,000/year
Estimated Implementation Period:	12 weeks
Estimated Present Worth:	$1,885,600

This remedy consists of a combination of treatment of soils highly contaminated with PCB/cPAHs and on-site containment of treatment residuals and less contaminated soils. Highly contaminated soils, defined as those with PCB concentrations greater than 25 ppm and total cPAHs greater than 29 ppm, are to be treated by on-site thermal desorption. Under this remedy, thermal desorption is to, at a minimum, reduce PCB concentrations to less than 10 ppm and total cPAHs to less than 20 ppm. Less contaminated soils, with PCB concentrations greater

than 2 ppm and less than 25 ppm and cPAHs greater than those in the Table in Appendix II, and less than 29 ppm total cPAHs are to be placed under a two foot soil cover and are subject to deed restrictions on that portion of the site. Treatment residuals that did not meet remediation goals but met the minimum standard for treatment would also to be placed under the soil cap.

Alternative 2: Excavation and Off-Site Disposal

Estimated Capital Cost:	$639,258
Estimated Implementation Period:	2 weeks
Estimated O&M Cost:	0
Estimated Present Worth:	639,258

This alternative consists of excavation and off-site disposal of the PCB and cPAH contaminated soils above remedial action goals (see the Table in Appendix II). Soil with total PCB levels at or above 50 ppm would be transported and disposed of in a Toxic Substances Control Act (TSCA) permitted landfill. Soils with PCB levels above 2 ppm and below 50 ppm would be disposed of in a permitted RCRA Subtitle D landfill. Soils already capped will remain on site.

Remediation action objectives are the specific goals that protect human health and the environment. The specific remedial action goals for the PCB/cPAH contaminated soils are listed in the Table in Appendix II. Changing the remedy to utilize alternative 2 will meet the remedial objectives at the site, since PCB/cPAH contaminated soil above remediation goals will be removed from the site. With this ROD Amendment, the capped area of the site will not be expanded further to accommodate treatment residuals from the thermal desorption unit. With a smaller cap on site, less of the site will be subjected to deed restrictions, freeing additional space for unrestricted future use.

EVALUATION OF ALTERNATIVES

During the detailed evaluation of remedial alternatives, each alternative was assessed utilizing nine evaluation criteria as set forth in Section 300.430(e)(g)(iii) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). These criteria were developed to address the requirements of Section 121 of CERCLA, 42 U.S.C. §9621, to ensure all important considerations are factored into remedy selection decisions.

The following threshold criteria are the most important, and must be satisfied by any alternatives in order to be eligible for selection:

Threshold Criteria

- **Overall protection of human health and the environment addresses** whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

- **Compliance with applicable or relevant and appropriate requirements (ARARS)** addresses whether or not a remedy will meet all off the applicable or relevant and appropriate requirements of other federal and state environmental statutes and requirements or provide grounds for invoking a waiver.

The following "primary balancing" criteria are used to make comparisons and to identify the major trade offs between alternatives:

Primary Balancing Criteria

- **Long term effectiveness and permanence** refers to the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met.

- **Reduction of toxicity, mobility, or volume through treatment** is the anticipated performance of the treatment technologies a remedy may employ.

- **Short term effectiveness** addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved.

- **Implementability** is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.

- **Cost** includes estimated capital and operation and maintenance costs, and net present worth costs.

The following modifying criteria are considered fully after the formal public comment period on the Proposed Plan is complete:
Modifying Criteria

- **EPA acceptance** discusses if it, as the support agency, concurs with the remedy selected by the NJDEP.

- **Community acceptance** is assessed based on a review of the public comments received on the RI/FS reports and the Proposed Plan.

A comparative analysis of the two remedies based upon these evaluation criteria follows.

- Overall Protection of Human Health and the Environment

  Alternative 1, on-site treatment by thermal desorption, would provide protection to

human health by treating the contaminated soil. As a component of the thermal desorption remedy, soils with concentrations of PCBs above the 2 mg/kg remediation goal but below 25 mg/kg and soils with carcinogenic PAH concentrations above their compound specific remediation goals but below 29 mg/kg would remain on the site under a soil cover.

Alternative 2, off-site disposal would provide protection of human health and the environment by removing all PCB/cPAH contaminated soil above remediation goals from the site and disposing of it in an appropriate landfill. Only soils that meet the remediation goals as specified in the 1993 ROD will remain on the site; no additional PCB or cPAH contaminated soil would be placed under the soil cover.

Compliance with ARARs

Applicable or relevant and appropriate requirements (ARARs) are those federal or state environmental and public health regulations that apply to remedial activities at a site. There are three classifications of ARARs: chemical specific, which are health or risk based concentration limits; location specific, which are based on the geographical location of the site and its surroundings; and action specific, which are controls on particular types of remedial activities.

The principal action-specific ARARs for the site include the requirements of TSCA. Alternative 1 would comply with the performance based disposal requirements of TSCA as stated in §761.61(b). Alternative 1 would not comply with the chemical waste landfill requirement of TSCA, and therefore, would require a waiver of those requirments.

Alternative 2 would comply with all applicable TSCA requirements (40 CFR Parts 761.60 - 761.9). Landfilling of soils with PCB concentrations of 50 ppm or greater would be performed in an off-site TSCA-approved landfill. All necessary approvals would be obtained prior to disposal to ensure soils meet the facility's permit restrictions. For air emissions associated with the operation of the on-site thermal desorption unit or other storage and handling activities, the action-specific ARARs and guidance which would be met include 40 CFR Part 50.

Location-specific ARARs would include Executive Orders 11988 and 11990 for floodplain management and the protection of wetlands (40 CFR Part 6.302 and 40 CFR Part 6, Appendix A) for actions that may occur within a floodplain or wetland as well as N.J.A.C. 7:8-3.15 *et seq.* stream encroachment, N.J.A.C. 7:7A Freshwater Wetlands Protection Act, N.J.S.A. 13:17-1 *et seq* Hackensack Meadowlands Development Commission, and the Coastal Zone management Act 16 USC 1451.

New Jersey Soil Quality Criteria are a "To Be Considered" criterion. The soil quality criteria are risk based numbers designed to provide protection to human health and the

environment.

Long-term Effectiveness

Both Alternative 1 and Alternative 2are protective in the long-term. Although the thermal desorption remedy offers a higher degree of permanence, the thermal desorption remedy will leave additional amounts of PCB/cPAH contaminated soils with levels above the remediation goals on the site, covered with two feet of clean soil. Under the off-site disposal remedy, soils already placed under the soil cover would remain on site. However, no additional soils containing PCB/cPAHs above remediation goals would be placed under the soil cover on site, thus limiting areas subject to deed restrictions.

Reduction of Toxicity, Mobility, or Volume

Alternative 1 will reduce the toxicity, mobility and volume in the highly contaminated soils since treatment will occur. Alternative 2, off-site disposal, will reduce the mobility of the contamination since the soils will be placed in a secured landfill. While off-site disposal will remove the contaminated soils from this site, the toxicity and volume of the contaminated soils will not change.

Short-term Effectiveness

The potential risks to the surrounding community are minimal for both remedies. However, when the thermal desorption system was operating at the site previously, workers from an adjacent facility made complaints about the odors associated with the treatment. Since Alternative 2 would not include treatment, odor complaints would not be an issue. Moreover, off-site disposal will take less time. The time frame for completion of off-site disposal is two weeks, while the time frame for the completion of thermal desorption is twelve weeks.

Implementability

Alternative 2 is technically feasible, there are no issues regarding the implementability of this remedy that must be addressed, and the remedy would not add additional waste under the soil cover. Alternative 1 is also technically feasible, although due to site soil conditions, soil contact times with the treatment unit proved to be excessive. Also, when other PCB and carcinogenic PAH contaminated soils were previously treated at the site using this technology, complaints related to the odors from the treatment plant were made by workers from an adjacent facility. If the remaining 6,200 tons of soil are to be treated by thermal desorption, the plant may have to operate only when the prevailing winds are northerly in order to avoid these odor complaints.

Cost

The cost of off-site disposal is considerably less than the on-site thermal desorption treatment. The cost for thermal desorption is estimated to be $1,885,600. This includes costs associated with mobilizing a new thermal desorption unit at the site since the previous unit has been removed. The cost for off site disposal is estimated to be $639,258. The cost of off-site disposal has significantly decreased since the 1993 ROD, making this remedial alternative more competitive.

USEPA Acceptance

The USEPA concurs with the proposed change to the remedy.

Community Acceptance

NJDEP solicited comments from the community on the proposed remedial alternatives for the PCB/cPAH soil contamination at the site. The attached responsiveness responsiveness summary addresses all verbal comments received at the public meeting. No written comments were received during the public comment period.

Selected Remedy

After reviewing the alternatives and public comments, NJDEP and EPA have determined that Alternative 2 is the appropriate remedy for the site because it best satisfies the requirements of CERCLA §121, 42 U.S.C. §9621, and the NCP's nine evaluation criteria for remedial alternatives, 40 CFR §300.430(e)(9)(iii).

The major components of the modified remedy are as follows:

- Approximately 6,200 tons of remaining sols with concentrations greater thatn the remedial action goals will be excavated;
- Soils with carcinogenic PAHs above the remediation goals will be disposed off-site;
- Soils with PCB concentrations at or above 50 ppm will be disposed of in a TSCA permitted landfill;
- Soils with PCB concentrations above 2 ppm but below 50 ppm will be disposed of in a RCRA Subtitle D permitted landfill.

STATUTORY DETERMINATIONS

As was previously noted, CERCLA § 121 (b)(1), 42 U.S.C. § 9621 (b)(1), mandates that a remedial action must be protective of human health and the environment, cost effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Section 121 (b)(1) also establishes a preference for remedial actions which employ treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances, pollutants, or contaminants at a site. CERCLA § 121(d), 42 U.S.C. § 9621(d), further specifies that a remedial action must attain a degree of cleanup that satisfies ARARs under federal and state laws, unless a waiver can be justified pursuant to CERCLA §121(d) (4), 42 U.S.C. §9621(d) (4).

For the reasons discussed below, NJDEP and EPA have determined that the selected remedy for the UOP site meets the requirements of CERCLA § 121, 42 U.S.C. §9621.

Protection of Human Health and the Environment

The selected remedy for contaminated soil provides the greatest protection of human health and the environment by removing the contaminated soils from the site. The selected remedy eliminates the risks associated with the possibility of future exposure.

Compliance with Applicable or Relevant and Appropriate Requirements (ARARS)

The selected remedy will meet all chemical-specific, action-specific, and location-specific ARARs discussed under the Summary of Comparative Analysis of Alternatives, above.

Cost effectiveness

The cost effectiveness of an alternative is determined by weighing the cost against the alternative's ability to achieve ARARs and remedial action objectives. The selected remedy has been found to afford overall effectiveness proportional to its costs. The selected remedy costs less to implement and reduces O&M costs by decreasing the area to be capped on site.

Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

Although the selected remedy does not employ a treatment technology, it utilizes permanent solutions to the maximum extent practicable and provides the best balance of trade-offs with respect to the nine evaluation criteria. Of the two alternatives considered to address the PCB/cPAH contaminated soils at the site, the selected remedy utilizes a permanent solution since the remaining PCB/cPAH contaminated soil will be completely removed and disposed of off site. In addition, the complete removal of the contaminated soils will provide a greater degree of flexibility for future development of the site. Furthermore, the selected remedy does not rely

upon long-term maintenance of the remaining PCB/cPAH contaminated soils to be protective of human health and the environment.

Preference for Treatment as a Principal Element

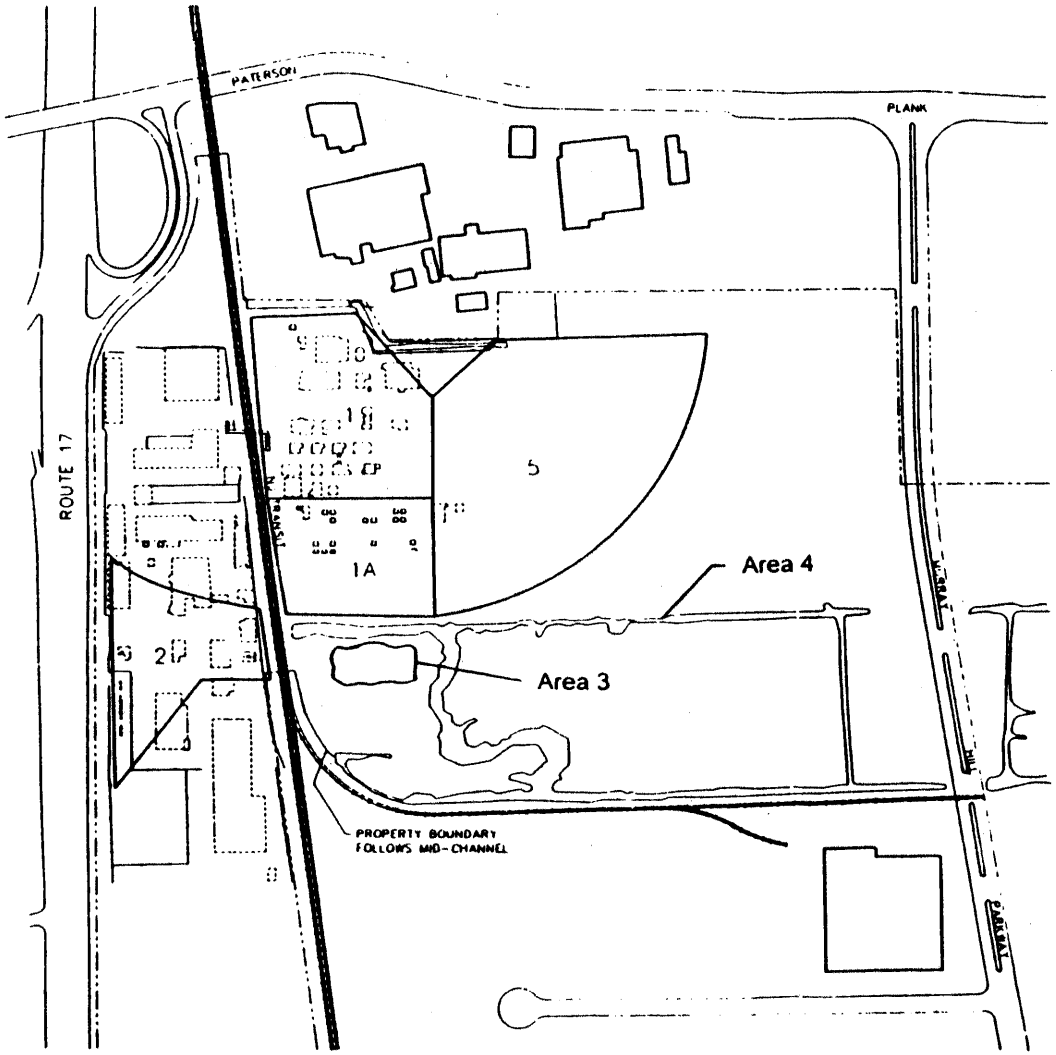
As previously described, thermal desorption treated a portion of the PCB/cPAH contaminated soils. However, difficulties involved with the implementation of the thermal desorption lead to increased costs and workers at an adjacent property complained about the odors associated with the treatment. While the selected remedy does not provide for treatment, it does provide the greatest overall benefit when compared to thermal desorption.

DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan for the UOP site ROD Amendment was released for public comment on June 17, 1998. The Proposed Plan identified Alternative 2 as the preferred remedy for the site. NJDEP has reviewed all verbal comments submitted during the public comment period. The notice of availability for these documents was published in the *South Bergenite* on June 17, 1998. A public comment period was held from June 17, 1998 to July 17, 1998. In addition a public meeting was held on June 30, 1998. A response to the comments raised at the public meeting is included in the Responsiveness Summary, which is part of this ROD Amendment. No written comments were submitted. Upon review of the comment raised at the public meeting, NJDEP has determined that no significant changes to the remedy, as it was originally defined in the Proposed Plan, were necessary.

APPENDIX I

FIGURES



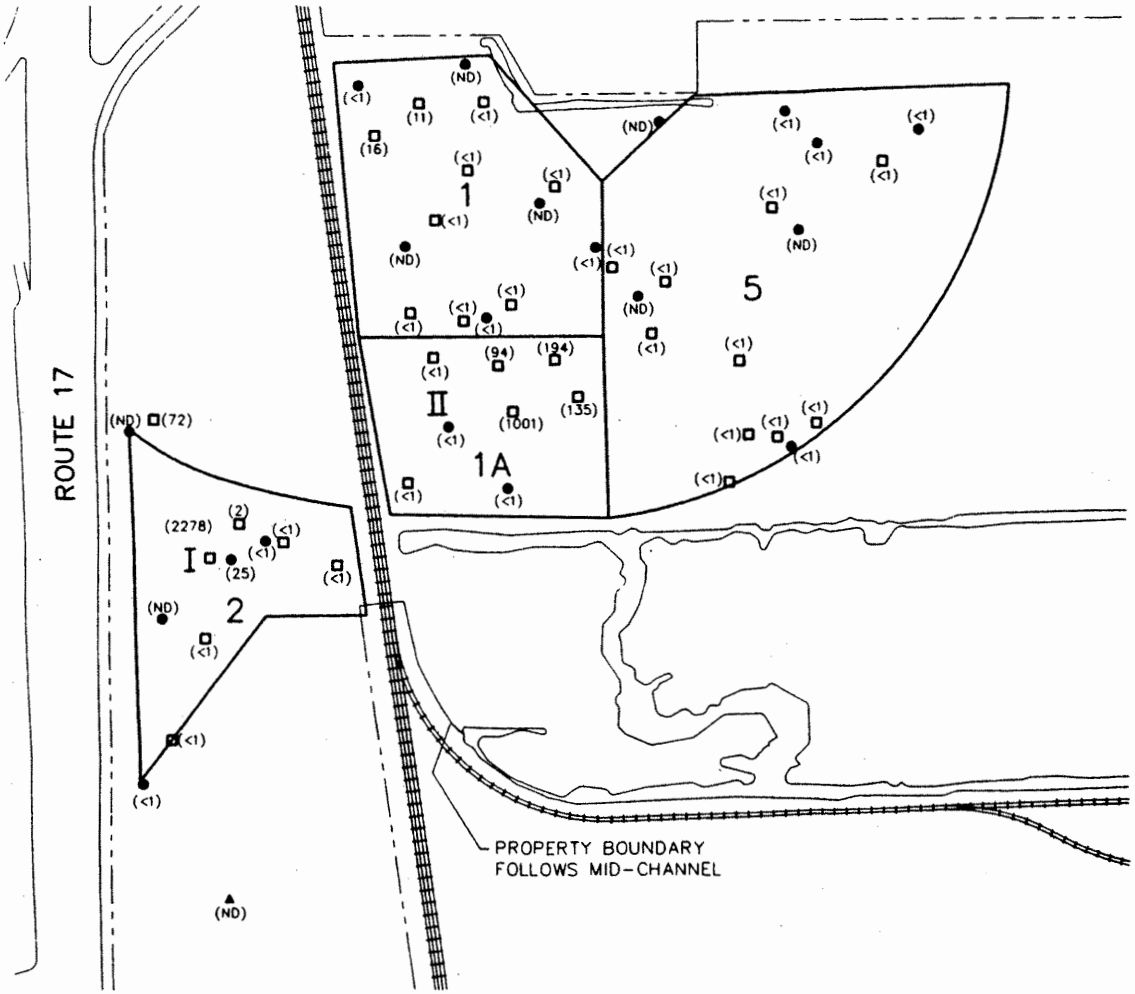
Areas 1, 1A, 2 and 5 - Uplands
Area 3 - Former Wastewater Lagoons
Area 4 - Stream Channels

N

0 300 600
SCALE IN FEET

REFERENCE DRAWING
ENSR Consulting and Engineering

Figure 1



LEGEND

□, ▲ SOIL BORING LOCATION

● MONITORING WELL LOCATION WHERE SOIL DATA COLLECTED

( ) CONCENTRATION IN mg/kg

0 200 400

SCALE IN FEET

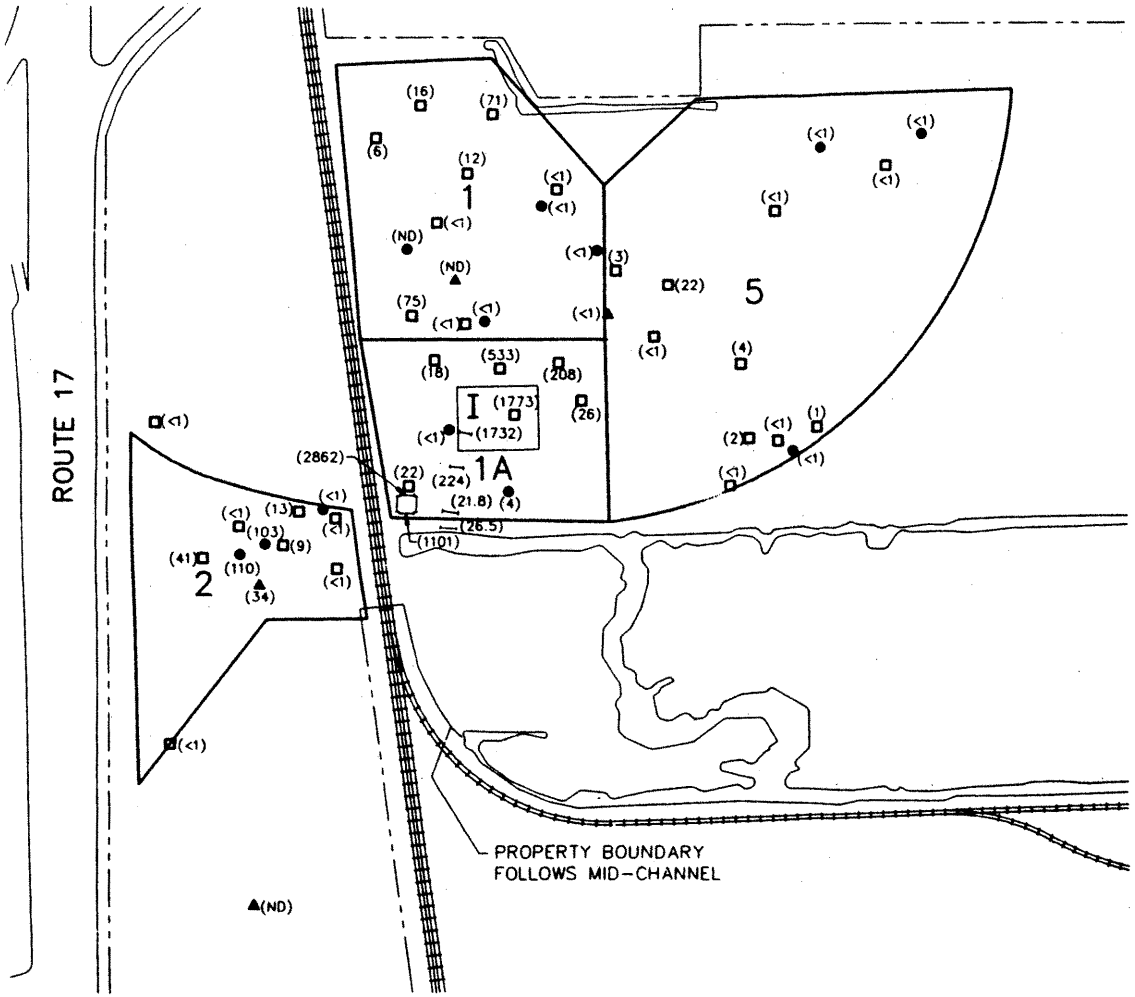
FIGURE 2

ENSR CONSULTING & ENGINEERING

CONCENTRATION OF TOTAL VOC IN SURFACE SOIL
UOP SITE
EAST RUTHERFORD, N.J.

DRAWN BY:	DATE:	PROJECT NO.
K.P.B.	6/92-FD	0186-002-295

2186248



LEGEND

- ▫ . ▲ SOIL BORING LOCATION
- ● MONITORING WELL LOCATION WHERE SOIL DATA COLLECTED
- • MAXIMUM OF TWO READINGS
- ( ) CONCENTRATION IN mg/kg
- — TEST PIT LOCATION

200 400

SCALE IN FEET

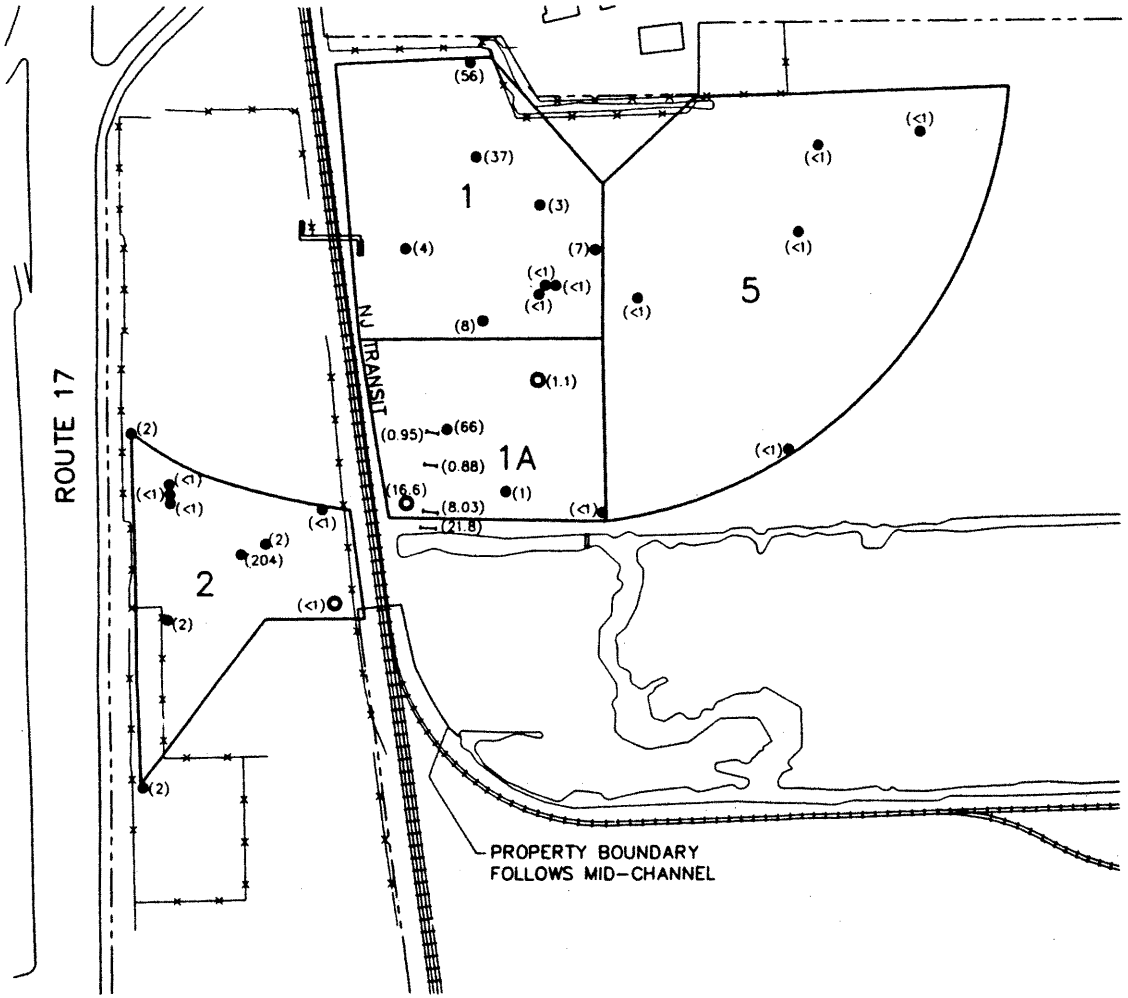
FIGURE 3

ENSR CONSULTING & ENGINEERING

CONCENTRATION OF TOTAL VOC IN SUBSURFACE SOIL
UOP SITE
EAST RUTHERFORD, N.J.

DRAWN BY:	DATE:	PROJECT NO
K.P.B.	6/92-FD	0186-002-295

0186135B



LEGEND

- ○,● MONITORING WELL LOCATION
- ( ) MAXIMUM VOC CONCENTRATION (mg/kg)
- ⊢ TEST PIT LOCATION

N

0 200 400

SCALE IN FEET

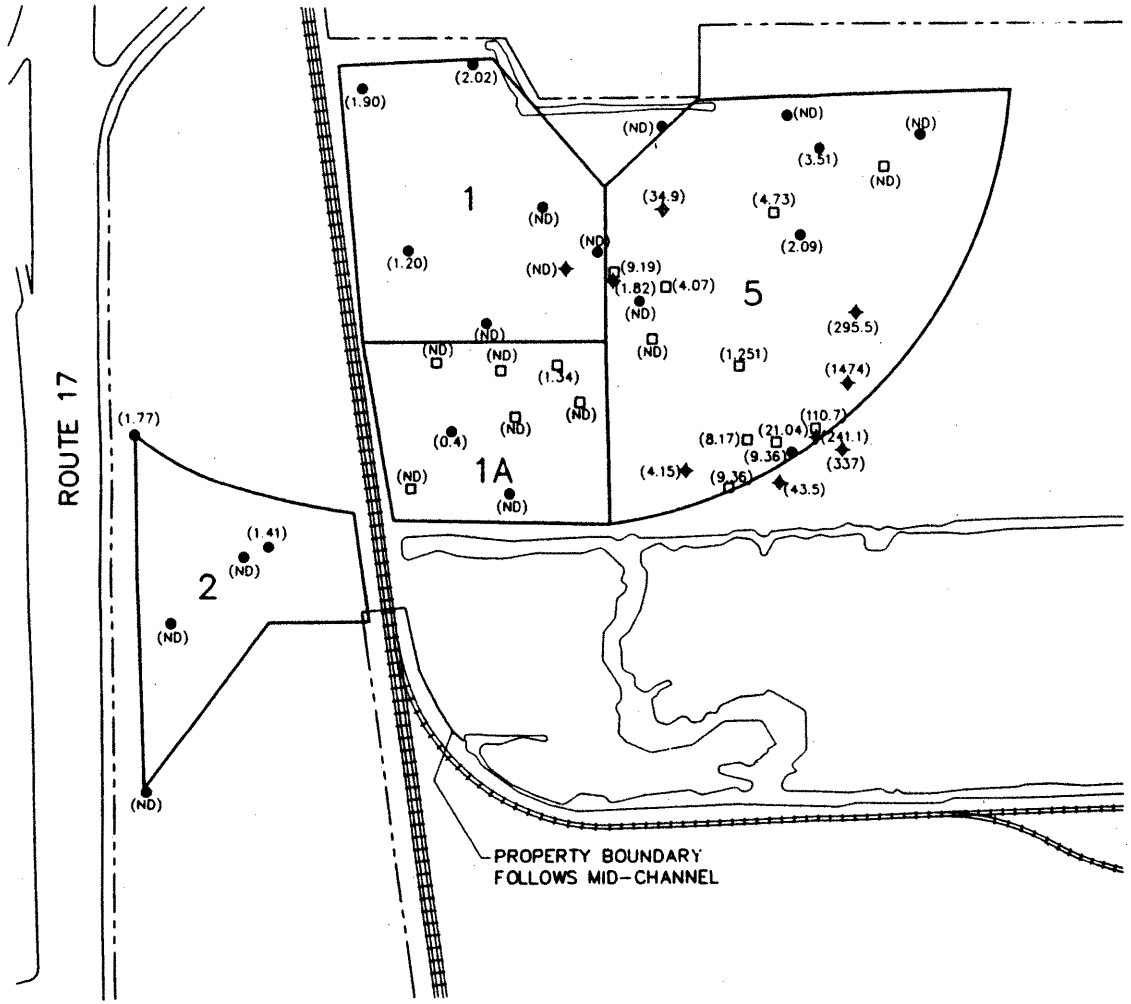
FIGURE 4

ENSR CONSULTING & ENGINEERING

CONCENTRATIONS OF TOTAL VOCs
IN GROUNDWATER
UOP SITE
EAST RUTHERFORD, N.J.

DRAWN BY:	DATE:	PROJECT NO.
J.E.B.	5/92	0186-002-295

0186498



LEGEND

- ▫ . ▲ SOIL BORING LOCATION
- ● MONITORING WELL LOCATION WHERE SOIL DATA COLLECTED
- ✦ SURFACE SAMPLE LOCATION (12/89)
- ( ) CONCENTRATION IN mg/kg

0 200 400

SCALE IN FEET

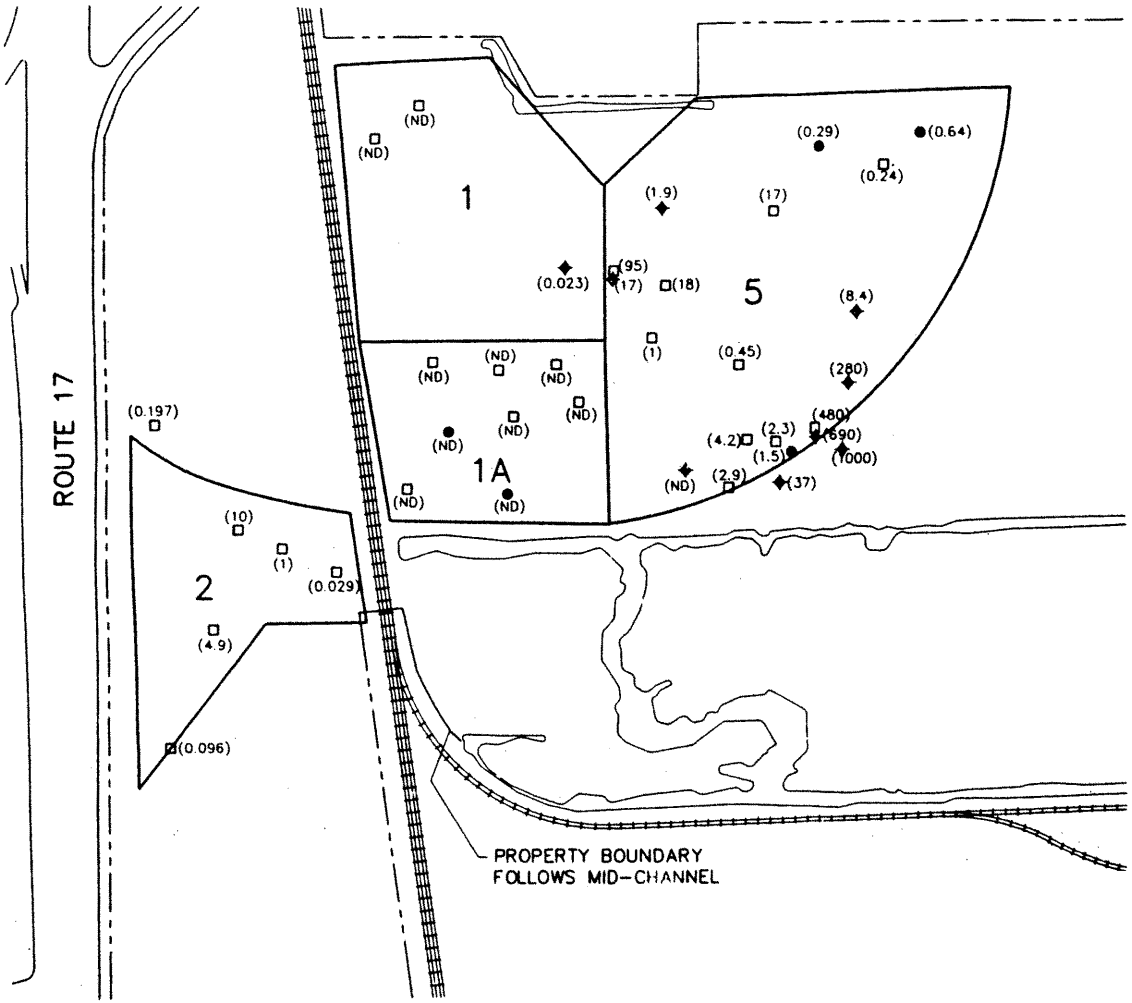
FIGURE 5

ENSR CONSULTING & ENGINEERING

CONCENTRATION OF TOTAL CARCINOGENIC PAH IN SURFACE SOIL
UOP SITE
EAST RUTHERFORD, N.J

DRAWN BY	DATE	PROJECT NO.
J.E.B.	6/92-FD	0186-002-295

0186288



LEGEND

- ▫ . ▲ SOIL BORING LOCATION
- ● MONITORING WELL LOCATION WHERE SOIL DATA COLLECTED
- ◆ SURFACE SAMPLE LOCATION (12/89)
- ( ) CONCENTRATION IN mg/kg

0 200 400

SCALE IN FEET

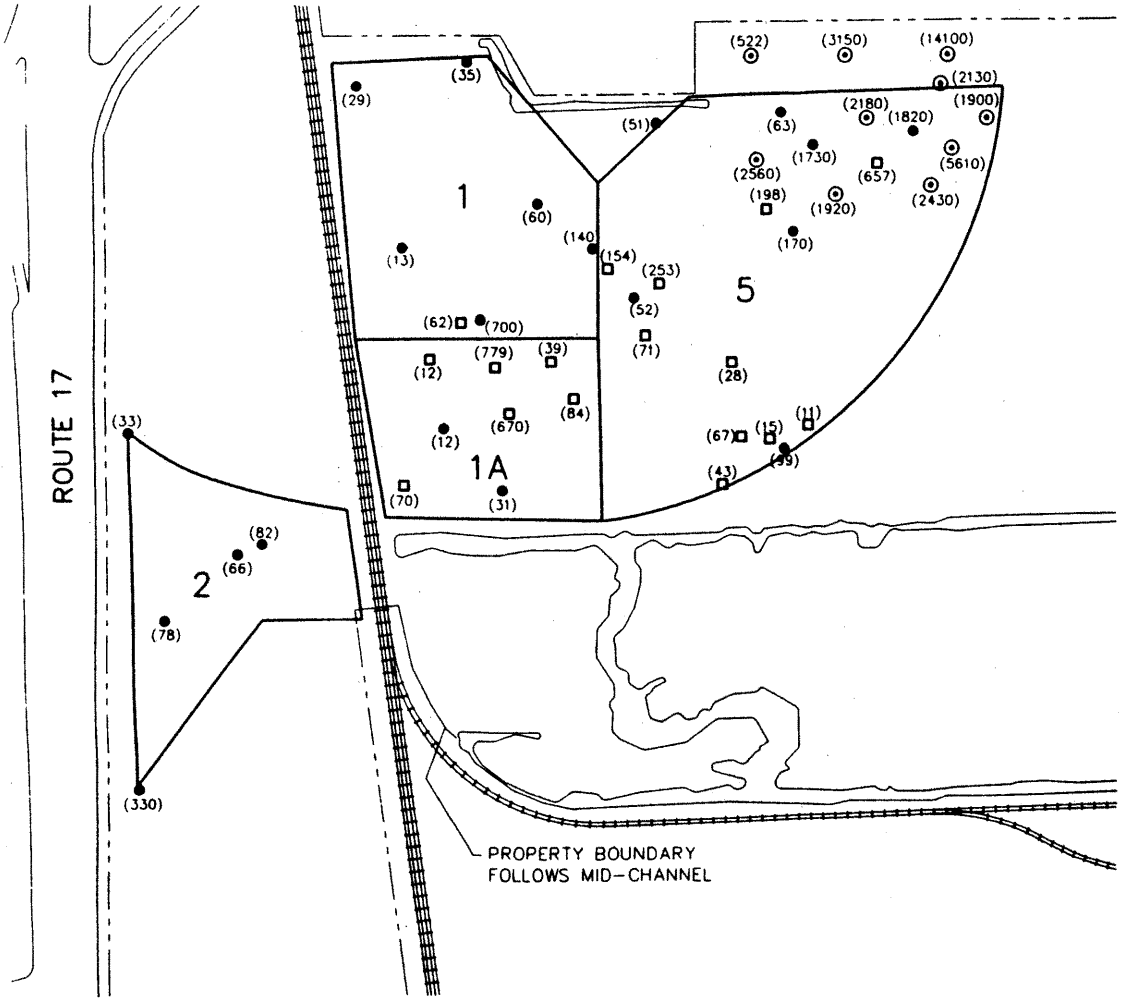
FIGURE 6

ENSR CONSULTING & ENGINEERING

CONCENTRATION OF PCB IN SURFACE SOIL
UOP SITE
EAST RUTHERFORD, N.J.

DRAWN BY:	DATE:	PROJECT NO:
J.E.B.	6/92-FD	0186--002-295

3186J0B



LEGEND

⊙ . □ . ▲ SOIL BORING LOCATION

● MONITORING WELL LOCATION WHERE SOIL DATA COLLECTED

( ) CONCENTRATION IN mg/kg

N

0 200 400

SCALE IN FEET

FIGURE 7

ENSR CONSULTING & ENGINEERING

CONCENTRATIONS OF LEAD IN SURFACE SOIL
UOP SITE
EAST RUTHERFORD, N J.

DRAWN BY:	DATE:	PROJECT NO.
K.P.B.	6/92-FD	0186-002-295

0186-26B

APPENDIX II

TABLE

Table
of
Remediation Goals

Contaminant	Remediation Goal, ppm
For Surface Soil:	
Carcinogenic PAHs	
Benzo(b)fluoranthene	4
Benzo(a)anthracene	4
Benzo(a)pyrene	0.66
Benzo(k)fluoranthene	4
Chrysene	40
Dibenzo(a,h)anthracene	0.66
Indeno(1,2,3-cd)pyrene	4
PCB	2
Lead	600
For All Soils:	
VOCs (total)	1000
1,1,2,2-Tetrachloroethane	21

APPENDIX III

ADMINISTRATIVE RECORD INDEX

ADMINISTRATIVE RECORD INDEX
UNIVERSAL OIL PRODUCTS SUPERFUND SITE
EAST RUTHERFORD, BERGEN COUNTY, NEW JERSEY

1. Administrative Consent Order (ACO) between UOP Inc. and the New Jersey Department of Environmental Protection, May 1986.

2. Remedial Investigation Report Areas 1, 1A, 2 and 5, Geraghty & Miller, Inc., May 1988.

3. Risk Assessment Report, ENSR Consulting and Engineering, June 1989.

4. Record of Decision, September 30, 1993.

5. Supplementary Investigation Summary Report, ENSR Consulting and Engineering, October 1993.

6. June 30, 1998 Public Meeting Proceedings Transcript, J&J Court Transcribers, Inc.

7. August 1997 Progress Report, AlliedSignal, Inc., September 8, 1997.

8. Request for ROD Amendment, AlliedSignal, Inc., November 17, 1998.

APPENDIX IV

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY FOR THE RECORD OF DECISION FOR THE UNIVERSAL OIL PRODUCTS (UOP) SUPERFUND SITE

A. OVERVIEW

This is a summary of the public's comments and concerns regarding the Proposed Plan for remediation of the PCB/cPAH contaminated soils at the UOP Superfund Site and the New Jersey Department of Environmental Protection's (NJDEP) responses to those comments.

The public comment period extended from June 17, 1998 through July 17, 1998 to provide interested parties the opportunity to comment on the Proposed Plan for the UOP Superfund Site. During the comment period, the NJDEP held a public meeting on June 30, 1998 at the East Rutherford Municipal Building to present the preferred remedial alternative.

The preferred remedial alternative is off-site disposal of PCB/cPAH-contaminated soils.

B. SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND AGENCY RESPONSES

No written comments were received during the public comment period. The comments presented below were made at the public meeting on June 30, 1998.

Comment 1:

Would you please explain and show on the map what areas have been remediated and what areas still require remediation?

Response 1:

The removal of the two wastewater lagoons (Operable Unit Two) was completed in 1990. In 1996, the thermal desorption unit began operation and treated 8,200 tons of PCB/cPAH contaminated soils. All the soils from Area 2 were either treated, placed under the cap, or staged in another area of the site awaiting treatment for volatile organic compound contamination. In addition, the volatile organic compound-contaminated leachate has been treated since 1996. To date, approximately 4,750,000 gallons have been treated. Also, there is about one acre of wetlands that needs to be restored.

(Note: All areas discussed were indicated on the map.)

Comment 2:

How many acres of wetlands exist on the property?

Response 2:

Approximately 15 to 17 acres of wetlands exist on the site. Delineation needs to be performed to accurately determine the amount of wetlands.

Comment 3:

Will you explain the cap on the site in more detail?

Response 3:

The contaminated soils that will remain on-site in accordance with the 1993 Record of Decision will be in a small mound that will be capped with a geosynthetic liner covered with additional clean soil. Grass will be planted and maintained. It will likely either be within a fenced perimeter itself or part of a larger enclosed area depending on the development of the property.

Comment 4:

Will the capped area continue to be a restricted area?

Response 4:

The area will be restricted but will not be completely unusable. It could possibly be used as a parking area provided additional engineering controls are in place, for example. It has possible uses that will be considered in the redevelopment plan.

Comment 5:

How many acres is the capped area?

Response 5:

The capped area encompasses seven acres.

Comment 6:

Why couldn’t the remaining PCB/cPAH-contaminated soil be removed from the site sooner?

Response 6:

The 1993 Record of Decision required that this soil be treated on-site by thermal desorption. To change that requirement, a new Proposed Plan had to be issued, a public meeting had to be held, and a Record of Decision Amendment had to be written. Once those requirements are met, the soil can be disposed of off-site.

Comment 7:

Did a remedial activity occur at the site approximately seven years ago?

Response 7:

Yes, the wastewater lagoons were excavated.

Comment 8:

Are there any plans to do any work on the property east of Murray Hill Parkway?

Response 8:

There was an investigation done on the uplands portion of that area and there was nothing to indicate that any contamination existed. Therefore, no remedial activity is anticipated. This portion of the property is being considered in the overall site redevelopment plan.

Regarding the stream channels in this area, there will be some remediation in the future since there is some contamination in the channels. However, this is being handled as a regional problem, since these channels flow into Berry's Creek, which has been contaminated by many Responsible Parties.

Comment 9:

Are the 17 acres (Area 2) along Route 17 remediated?

Response 9:

The PCB/cPAH-contaminated soils have been remediated in this area in 1997. The volatile organic compound-contaminated soils have been staged in another area of the site and were treated as part of a pilot test in 1998.

Comment 10:

Will Area 2 be developed?

Response 10:

The plans are to eventually develop that portion of the property after that area is deleted from the National Priorities List.

Comment 11:

Could you please explain the work that has occurred at the site since 1993?

Response 11:

In 1993, the Record of Decision was issued. A work plan was then developed, permits obtained, and contractors hired. In late 1995, the excavation the soils to be treated began, the ground water recovery system was installed, and treatment of the soils began. In 1997 there were difficulties with the contractor, so the remediation had to be stopped for about six months while a new contractor was hired. In addition, the process was shut down for the winter due to possible weather-related operational problems. The soils that will remain on-site will be capped this autumn.